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published in
Journal of Product & Brand Management
2020

DOI (link to publisher)
10.1108/JPBM-03-2020-2785

document version
Publisher's PDF, also known as Version of record

Green branding effects on consumer response: examining a brand stereotype-based mechanism

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Abstract

Purpose – This study aims to develop a comprehensive conceptual framework to investigate how green brand positioning strategies positively impact consumer response. It focusses on uncovering the causal mechanism in which such effect is mediated by brand stereotypes. Additionally, it outlines the moderating role of construal level in this formation process.

Design/methodology/approach – Three experimental studies were conducted to examine the hypotheses. Study 1 tests the positive influence of green brand positioning on consumer response. Study 2 tests the dual mediating effect of warmth and competence in the relationship between green brand positioning and consumer response. Study 3 further examines the moderating role of construal level in the effects of green brand positioning on brand stereotypes.

Findings – The findings reveal that green emotional positioning strategies are predominantly stereotyped as warm while green functional positioning strategies are predominantly stereotyped as competent. Both warm and competent mediate the effects of green brand positioning on consumer response. Furthermore, a congruency between green emotional positioning and high-level construal, as well as the match between green functional positioning and low-level construal, leads to more warmth and competence perception.

Originality/value – This study contributes to green brand management literature by proposing a brand stereotype-based mechanism to explain how green brand positioning strategies trigger consumers' stereotyping process, leading to positive consumer response. This study also identifies the construal level as a moderating variable that impacts consumers' warmth and competence perceptions towards two kinds of green brand positioning strategies. Managerially, the findings of this study provide managerial ideas for developing green branding strategies.

Keywords Construal level, Green brand positioning, Brand stereotype, Consumer response

Paper type Research paper

1. Introduction

In compliance with increasing societal concerns, as well as regulations and legislation regarding environmental degradation, many companies are endeavouring to integrate sustainability into their goals, strategies and practices (Lubin and Esty, 2010; Raska and Shaw, 2012). For example, Coca-Cola, Walmart, Tesla, GE and several other famous international companies have been actively undertaking their environmental strategic initiatives to reduce the pollution of existing products or services, implementing green process innovation and introducing eco-friendly products (Sheth *et al.*, 2011; Huang *et al.*, 2014). Consumers are also increasingly demanding environmentally friendly products (Cronin *et al.*, 2011; Wang and Horng, 2016). Therefore, green strategies and eco-friendly practices having been widely implemented for business performance, sustainable competitive advantage and even the survival of some organisations (Pickett-Baker and Ozaki, 2008). As an essential component of green marketing strategies, green branding, especially positioning green brands, has several strategic advantages, such as appealing to consumers who make environmental friendliness a high priority, transmitting signals of environmental responsibility and ethical concerns to the public and who achieve market differentiation over competitors by delivering unique environmental value (Hartmann *et al.*, 2005; Huang *et al.*, 2014). Consequently, a well-implemented green brand positioning strategy offers corporations an opportunity to gain a competitive advantage under the current prevalence of environmentalism consumption (Grant, 2008; Royne *et al.*, 2012).

An increasing number of studies have focussed on green branding issues and focus on consumer response to green branding positioning strategies. For example, Hartmann *et al.*

The current issue and full text archive of this journal is available on Emerald Insight at: **https://www.emerald.com/insight/1061-0421.htm**

Journal of Product & Brand Management
 [ISSN 1061-0421]
[DOI 10.1108/JPBM-03-2020-2785]

Received 8 March 2020
Revised 27 June 2020
17 August 2020
Accepted 17 August 2020

(2005) proposed that a combination of functional positioning and emotional positioning ensures consumers' positive response towards green brands. Huang *et al.* (2014) further suggested that active commutation campaigns from green brand positioning strategies enhance consumers' green brand knowledge, which ultimately affects their purchasing intention towards green products. However, extant literature is insufficient to build an overarching theoretical paradigm to explain how green brand positioning strategies affect brand attitude and green purchasing intention, especially from the perspective of consumer perception. There is also a lack of empirical research regarding the effectiveness of individual difference variables on the effectiveness of diverse green brand positioning strategies (Panda *et al.*, 2020). For corporations, green positioning strategies should be developed to effectively communicate with target consumers (Huang *et al.*, 2014). The act of linking misleading environmental claims to brands will exacerbate a consumer's sceptical attitude and negative responses on the part of consumers (Alamsyah *et al.*, 2020). Furthermore, current studies mainly focussed on the consequence of green branding strategies in developed countries; a such as country (China), which has the second-largest economy with emerging green markets, has not received attention in this regard (Zameer *et al.*, 2020; Wu *et al.*, 2018). Consequently, an in-depth understanding of how consumers cognise, experience and create associations with green brands based on their functional attributes or emotional benefits, remains unexplored, especially in the case of China.

To bridge the aforementioned knowledge gaps, this study proposes the notion of brand stereotypes as a causal mechanism to explain how consumers link perceptions of green brands' functional positioning and emotional positioning to the stereotyping process of warmth and competence, and then generate positive brand attitude and green purchasing intention. Drawing parallels with brand stereotyping processes, this study argues that consumers capture a set of brands' environment-related attributes and benefits through green positioning strategies. Upon encountering diverse positioning strategies, consumers will generate specific perceptions of brand warmth and competence to various extents, which, in turn, determine consumers' affective and behavioural responses towards green brands. Moreover, this study extends the current literature by examining the role of construal level as a moderator that influences the effect of two kinds of green brand positioning strategies on consumer warmth and competence perception. Importantly, the construal level theory is used to propose that different levels of abstraction, at which consumers construe objects and information, affect their interpretations of diverse green brand positioning strategies (Trope and Liberman, 2003). Specifically, we theorise that consumers who construe information at a higher level are more likely to focus on the abstract social value of green brands and, in turn, will generate more warm and competence perceptions towards green emotional positioning strategies. In contrast, consumers who construe information at a lower level are more likely to focus on the concrete utilitarian environmental benefit of green brands and, in turn, will generate more warm and competence perceptions towards green functional positioning strategies.

The research is based on experimental design, which uses consumer samples and design advertisement stimuli to expose participants to diverse green positioning strategies under controlled conditions. This study has the following objectives: firstly, investigating whether functional positioning and emotional positioning of a green brand corresponds to diverse brand stereotypes (warmth/competence) and examining the mechanism of brand stereotypes. Secondly, validating the moderating effect of construal level in the relationship between green brand positioning on consumers' brand stereotypes. The empirical results from the three established experiments support the proposed mediating role of brand stereotypes and the moderating role of construal level in the influence of green brand positioning on consumer response. More specifically, the findings indicate that green emotional positioning strategies and green functional positioning strategies are predominantly stereotyped as warm and competent, respectively. A congruency between green emotional positioning and higher construal level, as well as the match between green functional positioning and lower construal level, leads to more positive outcomes in brand warmth and competence. Managerially, the findings contribute to the field of green marketing in that they provide strategic guidelines for brand managers devising efficient green positioning strategies to trigger consumers' warmth, as well as competence perception and to further enhance consumer response. They also help green brand practitioners make informed choices by considering the influence of one key consumer individual difference variable (i.e. construal level) on the effectiveness of green emotional positioning strategies and green functional positioning strategies.

2. Theoretical background and hypothesis development

2.1 Green brand positioning

As one of the crucial brand management strategies, brand positioning refers to a part of the brand identity and value proposition that is actively communicated to target consumers (Aaker and Joachimsthaler, 2000). Brand positioning strategies consist of a series of deliberate and proactive actions that aim to obtain unique customer perceptions and differentiate brands from other market competitors (Kalafatis *et al.*, 2000). Although previous research has reached an agreement on brand positioning from both the strategic and analytical perspectives, there still exists an argument on the precise definition of "green brand positioning" (Hauser and Koppelman, 1979; Chaturvedi *et al.*, 1998; Ries and Trout, 1986). Positioning a brand as a "green brand" comprises active communication about the brand's unique green value originating from its environmentally friendly attributes with target customers (Hartmann *et al.*, 2005; Lin *et al.*, 2017). Most researchers agree that green branding cannot achieve commercial benefit if the brand's positioning strategy cannot clearly convey a brand's green attributes; therefore, green brand positioning strategies are regarded as an essential component of successful green branding strategies (Grove *et al.*, 1996; Kumar, 2016).

Adhering to the classification schemes of general brand positioning, which classify brand positioning strategies into functional attribute positioning strategies and emotional attribute positioning strategies (Aaker, 1996). Green brands

can also be positioned either by their environmental functional attributes or their emotional benefits (Hartmann *et al.*, 2005). Functional positioning reflects the green brand's utilitarian environmental benefit compared with conventional alternative brands, such as energy savings, low carbon emissions and recyclability (Nagar, 2015; Maniatis, 2016). Emotional positioning reflects its symbolic benefits, especially the brand's social utility for consumers, such as warm feelings of generosity, self-esteem and nature-related experiences (Sheth *et al.*, 1991; Pihlstrom and Brush, 2008).

Prior research suggests that green branding cannot achieve commercial success if the unique environmental utility of green brands is not effectively communicated (de Chernatony, 1999). However, exclusive functional positioning strategies are not sufficient for consumers to generate positive brand attitudes and purchase intention (Ng *et al.*, 2014; Lin *et al.*, 2017). This is because consumers also value the additional emotional benefits of green brands when considering purchasing environment-friendly products (Griskevicius *et al.*, 2010). Green emotional positioning reflects a brand's symbolic benefit, especially a brand's social utility for consumers (Sirgy, 1982; Giebelhausen *et al.*, 2016). Lin *et al.* (2017) state that a combination of green functional attributes and green emotional benefits delivered from positioning strategies can not only evoke a green halo effect but can also build a positive green brand association with consumers. Consequently, the use of complementary green positioning strategies can enhance a consumer's cognitive and emotional perception of a green brand (Hartmann *et al.*, 2005; Papista *et al.*, 2018).

2.2 Consumer response towards green brands

Focussing on the outcome of green branding strategies, an increasing number of studies have revealed that consumers show positive emotions and supportive reactions towards green brands (Chen and Chang, 2013; Raska and Shaw, 2012). According to the theory of reasoned action (TRA) and the theory of planned behaviour (TPB), attitude and behavioural intention reflect consumers' overall cogitative judgements of a brand, which are regarded as the best predictors of consumers' actual behaviour (Ajzen, 1985,1991). TRA and TPB have also been widely used to explain consumers' green product adoption and consumer response towards green brands (Hsu *et al.*, 2017). In view of this, this study expects those green positioning strategies will influence consumers' attitudes and purchase intentions towards green brands. Attitude towards green brands involves individuals' self-concept and the degree to which they regard themselves as one part of the natural environment (Wesley Schultz and Zelezny, 1999). Teng (2009) and Huang *et al.* (2014) integrated this notion and defined attitude towards green brands as a consumer's overall evaluation of and preference for a brand with significant environmentally friendly attributes. Meanwhile, green purchasing intention specifically refers to a consumer's readiness to purchase environmentally friendly products that are designed with the goal of alleviating environmental degradation and conserving natural resources (Mostafa, 2007). Attitude towards green brands and green purchasing intention represent an individual's indication of engaging in pro-environmental behaviour and having a positive response to green marketing strategies (Sheng *et al.*, 2019).

Past research has addressed psychological and social factors in consumers' responses to green brands. For example, Mostafa (2007) argues that a consumer's environmental knowledge and consciousness exerts a great influence on that consumer's positive attitude towards green brands. Chen (2010) has also proposed that a consumer's green trust and a product's perceived green value serve as significant determinants in that consumers' purchase intention towards ecologically friendly brands. Meanwhile, some research has explored the relationship between green brand factors and green brand attitude, which has found that green brand image and green brand knowledge are positively associated with a consumer's green brand attitude and green purchasing intention (Cronin *et al.*, 2011). Specifically, some scholars have elaborated on the relationship between green brand positioning strategies and consumers' green brand attitudes through survey questionnaires and experimental design. They reveal that both green functional position and green emotional positioning have a significant positive effect on a consumer's attitude towards green brands (Hartmann *et al.*, 2005; Wang, 2017). In view of the above argument, we propose the following hypothesis:

H1. Green emotional positioning and green functional positioning have a positive effect on consumer response.

2.3 Brand stereotypes

The literature on social psychology argues that individuals are likely to depend on stereotypes to differentiate between the people and social groups around them (Aaker *et al.*, 2010). Stereotypes, as an inevitable by-product of human thinking, not only promote the people's understanding of social phenomena but also maintain the efficiency of their cognitive structure (Mayer *et al.*, 1995; McGarty *et al.*, 2002; Foddy *et al.*, 2009). Stereotypes, as pre-conceived and over-generalised social perceptions, are essentially a set of impressions, associations and judgements about a specific social group. The prominent stereotype content model proposed by Fiske *et al.* (2012), taken from the classic stereotypes theory, has identified two major dimensions, warmth and competence (Grandey *et al.*, 2005; Judd *et al.*, 2005). Warmth judgements capture perceptions associated with behavioural intention, including trustworthiness, friendless and sincerity traits, whereas competence judgements reflect perceptions associated with the ability to complete specific actions, including confidence, intelligence and competitiveness traits (Yzerbyt *et al.*, 2005; Aaker, 1996; Aaker *et al.*, 2010). Recent research has suggested that the stereotype content model provides a robust framework that can be applied to understand people's cognitive structure of some non-human entities such as brands, countries and organisations (Fournier, 1998). A consumer's perception of a brand goes beyond the evaluation of its performance and emotional benefit (Ivens *et al.*, 2015; Morgan and Hunt, 1994). Following this reasoning, Kervyn *et al.* (2012) proposed the brands as intentional agents framework (BIAF) to illustrate that consumers' judgements of a brand are also driven by warmth and competence. Overall, consumers regard brands with benevolent intentions as warm, and brands with competitive intentions as cold. Consumers regard brands with the ability to

induce intention as competent, and brands that are unable to enact their intentions as incompetent (Fiske *et al.*, 2012; Bennett and Hill, 2012; Bergsieker *et al.*, 2012).

All brands are involved in the stereotyping process, and the cognitive process of stereotypes takes place when consumers go through green brands' environmentally friendly features and cues, which further trigger consumers' specific judgement and perception (Wang and Horng, 2016; Davvetas and Diamantopoulos, 2018). Accordingly, we postulate that the perception of two kinds of green positioning strategies corresponds to diverse stereotypes. A green brand positioned by its emotional benefit is primarily expected to be stereotyped as warm. According to the altruism theory and the notion of warm feelings, emotional brand benefits can be characterised into three basic types: altruistic benefits, self-expressive benefits and other nature-related benefits (Andreoni, 1989; Barclay and Willer, 2006; Van Vugt *et al.*, 2007). From a consumer perspective, firstly, they experience a feeling of warmth from the altruistic benefit stemming from green brands' contribution to the benefit of the natural environment (Hartmann *et al.*, 2005; Papista and Krystallis, 2013; Pickett-Baker and Ozaki, 2008). Secondly, signalling theory in brand-related research argues that signalling is the process that conveys a brand's information implicitly, by engaging in actions revealing its unique attributes and benefits (Ritov and Kahnemann, 1997). Environmentally conscious consumers obtain social identity and reputation from the visible consumption behaviour of green brands. Such emotional benefit enhances a pleasant experience and close relationship, which makes consumers believe the brand's benevolent and caring intention. Beyond altruistic benefits and self-expression benefits, other nature-related benefits originating from emotional positioning strategies evoke a sensation of affinity between human beings and the natural environment, which is translated into consumers' positive perception of a brand's sincerity, helpfulness, genuine and other traits (Kals *et al.*, 1999). Consequently, consumers' judgement of warmth towards green brands is expected to be more salient under emotional positioning strategies. Thus, it is posited that:

H2. Green emotional positioning strategies are judged higher on warmth than green functional positioning strategies.

On the other hand, green brand positioning by its environmental functional attributes gives consumers a more positive perception of competence. Firstly, green functional positioning indicates that green brands offer environmental performance advantages such as lower hazards and toxic substances and higher reusability and recyclability (Wang, 2017). Secondly, green brands under functional attribute positioning are conceptualised as dominant corporate agents that have enough environmental knowledge and skills to fulfil environmentally friendly goals such as fuel energy savings, low carbon emissions and the utilisation of by-products, which ultimately increase consumers' perceived brand credibility (Chang, 2011; Cronin *et al.*, 2011). Additionally, a green functional positioning strategy indicates that brands have essential resources and capabilities to alleviate environmental degradation with their large investments in green innovations (Hartmann *et al.*, 2015). According to the knowledge–attitude–skill model, competence consists of three major components: cognitive skill, regarded as internal knowledge; emotional skill, regarded as an implicit attitude; and physical skill (Cutcliffe and Sloan, 2014). As a result, green brands under functional positioning strategies are more likely to be stereotyped as competent brands, which can result in significant environmental performance. Thus, we posit that:

H3. Green functional positioning strategies are judged higher on competence than on green emotional strategies.

Focussing on the critical roles of brand stereotypes, some studies argue that consumers' perception of warmth and competence can effectively predict their brand-related emotions (Ivens *et al.*, 2015). Empirical findings suggest that warmth and competence not only stimulate brand admiration but also have positive behavioural consequences. Being perceived as both competent and warm can increase consumers' willingness to purchase, which can be further translated into customers' satisfaction engagement and loyalty (Davvetas and Halkias, 2019). Aaker *et al.* (2012) conclude that a brand with a combination of high-level warmth and competence lands in the "golden quadrant". Building on the above arguments, we posit that two kinds of green brand positioning strategies are perceived as both warm and competent to some extent, which will generate a spill-over effect on a consumer's response towards a green brand. The following hypotheses are proposed:

H4. Perceptions of green brands' warmth mediate the positive effect of green brand positioning on consumers' responses to green brands.

H5. Perceptions of green brands' competence mediate the positive effect of green brand positioning on consumers' responses to green brands.

2.4 Construal level

Construal level theory proposes that individuals construe actions or objects at differential levels of abstraction (Trope and Liberman, 2003). A high abstract construal is represented in decontextualised and superordinate features, which tends to reflect a general understanding of an action or object, whereas a low concrete construal is represented in contextualised and subordinate features, which tends to reflect the details of an action or event (Trope and Liberman, 2010). Research has suggested that as psychological distance increases, a high-level construal is more likely to be activated. Conversely, as the psychological distance from an object decreases, a low-level construal is more likely to be activated (Liberman and Trope, 1998; Liberman *et al.*, 2007). Psychological distance refers to the mental formation of how far an object is perceived, which can be characterised as physical distance, temporal distance and social distance (Trope *et al.*, 2007). To date, research has regarded construal level as an individual difference variable, which reflects that people chronically consider the objects or actions with either an abstract mindset or a concrete mindset (Vallacher and Wegner, 1989;

Fujita *et al.*, 2006). On the other hand, the construal level is also a temporary mindset of people that can be experimentally manipulated by situational cues (White *et al.*, 2011; Reczek *et al.*, 2018).

Previous literature has provided clues that consumers differentially interpret the meaning of marketing information due to their construal level, which ultimately affects their evaluations, judgements and decision-making (Cheema and Patrick, 2008; Hong and Lee, 2010). In the domain of green communication strategies, the beliefs of construal level theory also have significant applicability. Environmental messages that communicate a corporation's sustainability initiatives can be construed in either concrete construal or abstract construal (Line *et al.*, 2016). Applying to the context of green brand positioning, it is reasonable to assume that consumers' construal level moderates the perception of warmth- and competence-capturing from two kinds of green branding positioning strategies. Firstly, the self-expressive benefit and ethical value emphasised by green emotional positioning strategies reflect a more abstract understanding of green brands, which is closely aligned with a high level of construal (Reczek *et al.*, 2018). The unique utilitarian environmental benefit emphasised by green functional positioning strategies reflects a more detailed and specific understanding of green brands, which is facilitated by a low level of construal. Additionally, as scholars suggest that consumers represent the same action – at lower construal levels, involving more considerations of feasibility, such as the means to the outcome; at higher construal levels, emphasising more aspects of desirability, such as the meaning of an action (Etkin and Ratner, 2013; Liberman and Trope, 1998). As such, green emotional strategies that provide a broader view of the social value of environmental protection are systematically associated with high-level abstract thinking, while green functional strategies that provide detailed actions and steps to solve environmental problems are systematically associated with low-level concrete thinking. Thus, we propose that there exists a matching effect, wherein consumers at a higher level of construal generate more warmth and competence judgement towards green emotional positioning. Similarly, consumers at a lower level construal generate more warmth and competence judgement towards green functional positioning. The congruence between green brand positioning strategies and the consumer construal level facilitates stereotype processing, which will further enhance consumer response. Thus, we posit the following hypotheses:

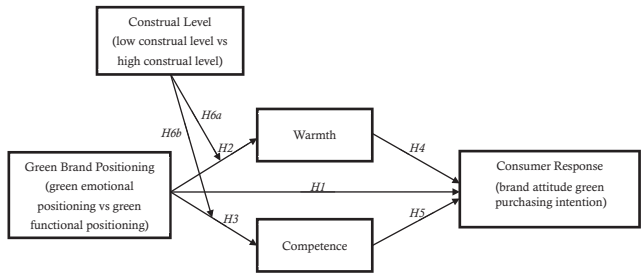
H6. Consumers' construal level moderates the effect of green brand positioning on warmth and competence.

H6a. Consumers exhibit more warmth and competence judgement when green emotional positioning is targeted at a high construal level.

H6b. Consumers exhibit more warmth and competence judgement when green functional positioning is targeted at a low construal level.

To highlight the relationships discussed above, a conceptual model is presented in Figure 1.

Figure 1 Conceptual model



3. Study 1

Study 1 aims to test directly whether the green emotional vs green functional positioning strategy positively affects consumers' brand attitude and green purchasing intention.

3.1 Method

An experimental study in a one-way between-subject design was conducted to examine *H1*. Undergraduate students from a university in Northeast China were recruited to participate in the experiment. The emotional positioning or functional positioning of a green dairy brand was manipulated to result in three experimental conditions (green emotional vs green functional vs control). The dairy industry was selected because it supplies products for people's daily consumption. An online anonymous questionnaire prompted 40 postgraduate students to choose one familiar green brand from their daily dairy consumption. "Mengniu" was selected as the most famous green brand ($M_{\text{brand familiar}} = 5.987$) from eight representative green brands (e.g. Nutrilon, Anchor, Yili, Weidendorf, Mengniu, Nestlé, etc.).

3.2 Experimental manipulation and material

The manipulation of green positioning was operationalised by varying media endorsement of the environmental value proposition of the green brand (Mengniu). We organised three versions of media endorsement, which are similar in structure, word count and presentation format, but differed with regard to whether they conveyed emotional benefits (emotional positioning), functional attributes (functional positioning) or none of them (control condition). Specifically, the description in the green emotional positioning condition was that:

> The brand has passed on the green concepts of originating from nature, sharing nature and giving back to nature, to take steps towards rewarding society and caring for Mother Earth

The description in the green emotional positioning condition stated that:

> The brand has carried out a ranch wastewater discharge and water recycling project, a forage grass planting management project, etc., to promote a green farm concept and its effect on environmental protection

The corresponding part of the control condition provides an introduction to the brand. To safeguard internal validity, the conditions across the three experiments were identical.

The appropriateness of the experimental manipulation was examined through a pre-test ($n = 60$) prior to the main study. Participants were randomly selected for presentation with three versions of media endorsement. Then, they were asked to rate

green emotional positioning (GEP) and green functional positioning (GFP) on seven-point scales, respectively (1 = strongly disagree; 7 = strongly agree). GFP and GEP were measured using four items. Both constructs were measured with established scales from the study of Huang *et al.* (2014) and Lin *et al.* (2017), which had high reliability (α_{GFA} = 0.0960; α_{GEB} = 0.954). The results of a paired t-test revealed that the participants exposed to the media report about GEP had a significantly higher rating on GEP than GFP (M_{GEP} = 5.588, SD = 0.998 vs M_{GFP} = 3.815, SD = 1.118; $t(19) = 5.4309$, $p < 0.001$), while those exposed to the media report about GFP had a significantly higher rating on GFP as opposed to GEP (M_{GEP} = 3.975, SD = 0.561 vs M_{GFP} = 5.563, SD = 0.428; $t(19) = -9.592$, $p < 0.001$). No significant difference was found in the control condition (M_{GEP} = 3.288, SD = 1.156 vs M_{GFP} = 3.225, SD = 0.956; $t(19) = 0.170$, $p > 0.1$). Therefore, the results of the pre-test examine the validity of the manipulation of green brand positioning.

3.3 Procedure and measures

Participants (n = 134; ages 18-22, M_{age} = 20; 31.5% female) were randomly assigned to a green emotional experimental condition or green functional condition. Initially, they were presented with a brief introduction of the experimental study and were randomly exposed to corresponding descriptions. Then, they were asked to rate GEP and GFP on a series of seven-point scales (1 = strongly disagree; 7 = strongly agree). Next, participants reported their brand attitude and the extent to which they were likely to purchase from this brand. The brand attitude was assessed using four items modified from the work of Hartmann *et al.* (2005) and Huang *et al.* (2014), while green purchasing intention was assessed by three items modified from the work of Chan (2001). At the final stage, participants were asked to provide demographic information and were thanked and paid for completing the experiment.

ANOVA analysis was applied to test the key demographic variables relevant to the 134 valid responses, which showed no significant differences between the two groups (GEP vs GFP). Thus, there was no response bias in the sample of Study 1. To detect common method variance (CMV), Harman's single factor method under exploratory factor analysis was used (Harman, 1967). The results showed that four factors were extracted, with 32.94% in the first factor explained of the total variance, which was less than 50%. Hence, there was no severe common method variance (CMV) in this study 1. Moreover, reliability analysis showed that the Cronbach's alpha value for all variables was greater than the acceptable level (0.70). The results of the confirmatory factor analysis further showed that the measures of Study 1 generated good convergent validity, discriminant validity and satisfactory goodness-of-fit. An overview of the construct and measures items across Study 1 is shown in Table 1. An overview of the descriptive statistics, validity and correlation matrices of Study 1 are shown in Table 2.

3.4 Results

*Manipulation check of green brand positi*oning independent t-test results indicated that participants in the green emotional positioning condition rated higher GEP than those under the green functional positioning condition (M_{GEP} = 5.716, SD = 0.783 vs M_{GFP} = 4.216, SD = 0.925; $t(132) = 10.128$, $p < 0.001$). In contrast, participants in the green functional positioning condition rated higher GFP than those under the green emotional positioning condition (M_{GEP} = 4.244, SD = 0.937 vs M_{GFP} = −5.590, SD = 0.839; $t(132) = 8.760$, $p < 0.001$). Like the results of the pre-test, the effectiveness of green brand positioning manipulation was supported.

Test the causal role *of green brand positioning on consumer response*. A regression analysis was conducted to examine the relationship between green brand positioning and consumer

Table 1 Measures, items and item reliabilities

Constructs and items	Standardised factor loadings
Green emotional positioning **(GEP) CR = 0.881, AVE = 0.649 and α = 0.887**	
This brand is close to nature	0.830
This brand is friendly	0.774
With this brand, I can feel good because I help to protect the environment	0.840
With this brand, I can express my environmental concern	0.776
Green functional positioning **(GFP) CR = 0.861, AVE = 0.608 and α = 0.880**	
This brand is leading	0.837
This brand is of high quality	0.765
This brand prevents global warming	0.749
Products of this brand do not pollute the environment	0.765
Brand attitude **(BA) CR = 0.814, AVE = 0.526 and α = 0.789**	
I think this brand is trustworthy	0.636
I think the function of the brand can fit my needs	0.650
I think the products of this brand is trustworthy	0.849
I will recommend this brand to my friends	0.744
Green purchasing intention **(GPI) CR = 0.749, AVE = 0.501 and α = 0.745**	
I will consider buying products because they are less polluting	0.617
I would buy the products out of concern for the environment	0.712
The possibility of my purchasing the products of this brand is high	0.784
Model fit χ^2/df = 2.879, RESMA= 0.058, GFI = 0.891, CFI = 0.923	

Notes: CR, construct reliability; AVE, average variance extracted; α, Cronbach's α

Table 2 Descriptive statistics and correlation matrices – Study 1

Construct	Mean	SD	GEP	GFP	BA	GPI
GEP	4.967	1.134	*0.806*			
GFP	4.917	1.109	−0.267**	*0.780*		
BA	5.44	1.013	0.291**	0.243**	*0.725*	
GPI	5.667	0.702	0.272**	0.287**	0.366**	*0.708*

Notes: n = 134; SD, standard deviation. **Significant at 0.01 level, the square roots of the AVE are reported in italic, diagonally across the table

response. Results showed that the positive effects of green emotional positioning and green functional positioning were significant (β = 0.291, $p < 0.01$; β = 0.243, $p < 0.01$). Similarly, when green purchasing intention was regressed on green brand positioning, the positive effect of green emotional positioning and green functional positioning was also significant (β = 0.272, $p < 0.01$; β = 0.287, $p < 0.01$). Together, these results suggest that green brand positioning has a positive effect on consumer response. *H1* is supported. Furthermore, considering the gender bias that may exist in green consumption behaviour (Brough *et al.*, 2016), a 2 (gender) × 2 (green brand positioning) ANOVA was run to test the differential effect of gender bias on consumer response towards two kinds of green brand positioning strategies. The results revealed that no interaction between the two independent variables emerged (F (1, 130) = 0.571, p = 0.451; F (1, 130) = 0.597, p = 0.441). Such a result is not consistent with the findings of previous studies (Brough *et al.*, 2016). This is mainly because the sample we chose was young undergraduate university students and the sample size was not large enough.

4. Study 2

Study 2 aimed to test the relationship between green positioning and brand stereotypes. Furthermore, we sought to illuminate the dynamics that boost consumers' perception of warmth and competence through green brand positioning, and how they impact consumers' brand attitude and green purchasing intention.

4.1 Method

An experimental study in a one-way between-subject design was conducted to examine *H2*, *H3* and *H4*. The student sample was moved away to promote the robustness of the green branding effects among a more representative Chinese sample. Participants with independent purchasing ability from different regions of China were recruited through a survey company to complete an online questionnaire. We used a new product category in Study 2 to demonstrate the generalisability of the green branding effect. The product category of the air conditioner is chosen because it is a common green product category in the appliance industry, which also pertains to consumers' daily consumption. Unlike Study 1, a hypothetical green brand was manipulated to result in two experimental conditions because no initial green brand associations would interfere with the participant's response.

4.2 Experimental manipulation and material

Two purpose-designed advertisements were developed to promote a fictitious green brand of air conditioners. The advertisement of the green emotional positioning condition highlighted a nature-related experience: "it feels like breathing fresh air in the forest" when using the green air conditioner. The text advertisement was embedded in an image of a forest to evoke a connection to nature. No further environmentally functional cues or descriptions were displayed in the advertisement. The advertisement of a GFP condition highlighted environmentally friendly features of the green air conditioner, such as "no emission of hydrofluorocarbons through new ductless systems". The experimental procedure also provided some information about how hydrofluorocarbons are eliminated with an image of an ordinary air conditioner. There were no environmentally emotional cues or connotations displayed in the advertisement.

The appropriateness of the experimental manipulation was examined through a pre-test (n = 70) prior to the main study. Participants were randomly exposed to one advertisement for 3 min. Next, participants were asked to rate how much they assessed the brand with certain functional or emotional positioning on seven-point scales (1 = not at all, 7 = very much). Statements with characteristics include such as "less air pollution" or similar was used to assess the functional dimension; while statements with characteristics such as "in harmony with the environment" or similar were used to assess the emotional dimension. The remaining three statements include characteristics such as "high quality" or similar were used to assess other aspects of brands that are irrelevant to the subject of this study. All statements were drawn on research into green brand positioning and green branding effects, which were extracted from laddering interviews and network analysis (Hartmann and Apaolaza-Ibanez, 2012; Wang, 2017). The results of a paired t-test revealed that participants exposed to emotional-based advertisements had significantly higher ratings on GEP than GFP (M_{GEP} = 5.543, SD = 0.353 vs M_{GFP} = 4.057, SD = 0.439; $t(34) = 15.027$, $p < 0.001$), while those exposed to functional-based advertisements had significantly higher ratings on GFP statement as opposed to GEP (M_{GEP} = 3.962, SD = 1.038 vs M_{GFP} = 5.657, SD = 1.098; $t(34) = -6.764$, $p < 0.001$). Results of an independent t-test show that no significant difference was found in participants' ratings of other brand characteristics (M = 4.514, SD = 0.919 vs M = 4.857, SD = 1.380; $t(68) = -1.233$, $p > 0.1$).

4.3 Procedure and measures

Participants (n = 176; ages 18-66, M = 32.4; 46.4% female) were randomly assigned to one of the two experimental conditions. Firstly, they were presented with an overview of this study and then exposed to the corresponding designed advertisement. Next, participants completed a self-administered questionnaire, which included a series of questions to capture their brand attitude and green purchasing intentions and perceptions of warmth, as well as competence. Specifically, they were asked to report their attitude towards the green brand, including how much interest they had in purchasing an air conditioner on the same seven-point scales (1 = strongly disagree; 7 = strongly agree) in Study 1. They were then asked to rate brand warmth and competence on two three-item scales (warmth: kind, friendly and warm; competence: competent, intelligent and skilful) from the work of Aaker (2012). Finally, participants answered questions about their demographic information.

ANOVA analysis was applied to test the key demographic variables relevant to the 176 valid responses, which showed that no significant differences were found between the two groups (GEP vs GFP). Thus, there was no response bias in the sample of Study 2. Harman's single factor method under EFA was used to detect CMV. The EFA results showed that four factors were extracted, with 36.16% of the total variance in the first

factor explained, which was less than 50%. Hence, there was no severe CMV present in Study 2. An overview of the descriptive statistics, validity and correlation matrices of Study 2 are shown in Table 3, which indicates that the measures of Study 2 generated good consistency of reliability, convergent validity, discriminant validity and satisfactory goodness-of-fit.

4.4 Results

Brand stereotype identification. The results of an independent *t*-test showed that the GEP-designed advertisement was rated significantly higher on warmth perception rather than competence perception (M_{GEP} = 5.644, SD = 0.797 vs M_{GFP} = 4.894 SD = 0.769; $t(174) = 6.352$, $p < 0.001$), while the GFP-designed advertisement was judged more on competence (M_{GEP} = 4.773, SD = 0.960 vs M_{GFP} = 5.651, SD = 0.8069; $t(174) = -6.575$, $p < 0.001$). Thus, *H2* and *H3* are supported.

Mediation analysis. To test the specific predicted pathway (green brand positioning → warmth/competence → consumer response). A bootstrap method with 5,000 re-samples was performed by the PROCESS macro to estimate the indirect effects of warmth and competence at the 95% confidence interval (Model 4; Hayes, 2013). When the confidence interval excludes zero, the mediation is statistically significant. Green brand positioning was first dummy-coded as green emotional positioning = 0, green functional positioning = 1. Then, we entered warmth and competence as mediators of the effect of green brand positioning on brand attitude. A biased bootstrapping analysis with 5,000 samples indicated that the dual mediation model was significant for brand attitude (indirect effect $_{warmth}$ = −0.382, indirect effect $_{competence}$ = 0.316). Similarly, the dual mediation model was also significant for green purchasing intention (indirect effect $_{warmth}$ = −0.250; indirect effect $_{competence}$ = 0.240) (Preacher and Hayes, 2008). The results of the mediation analysis are shown in Table 4. Collectively, the above results support *H4* and *H5*.

5. Study 3

Study 3 was designed to examine the moderating effect of construal level. Furthermore, we sought to examine whether consumers at a higher-level construal generate more warmth and competence perception towards green emotional positioning, while consumers at a lower-level construal generate more warmth and competence judgement towards green functional positioning.

5.1 Method

A 2 (green brand positioning) × 2 (construal level) between-subject experiment was conducted to examine *H6*. MBA members from a university in Northeast China were recruited to participate in an online study.

Table 4 Mediation analysis of warmth and competence

Construct	Indirect effect	Boot SE	95% CI LLCI	95% CI ULCI
Brand attitude				
Warm	−0.382	0.091	−0590	−0.234
Competence	0.316	0.071	0.196	0.479
Green purchasing intention				
Warm	−0.250	0.117	−0.539	−0.0801
Competence	0.204	0.591	0.097	0.325

Note: 95% CI = 95% confidence interval, an indirect effect is all β-weighted

5.2 Experimental manipulation and material

Four versions of media endorsements for a fictitious green brand were created. For green brand positioning, the experimental manipulation was similar to that in Study 1, except for changing the real brand into a fictitious brand to avoid potential confounding effects due to previous brand familiarity. Situational cues were manipulated to induce construal levels in Study 3. The key strength of pre-validated manipulation is that applying an established procedure to the construal level provides greater confidence in supporting the results of the experiment. Meanwhile, other experimental studies of brand positioning strategies rely more on valid manipulations of consumers' construal level (De Vries Eline and Fennis Bob, 2019). The level of construal was manipulated by varying the temporal focus of the environmental value (White *et al.*, 2011). Specifically, participants under a higher level of construal condition read this: "the environmental value of the green brand benefits everyone in the future", while participants under the lower level of construal read this: "the environmental value of the green brand benefits everyone today".

A pre-test with undergraduate students (n = 90) was conducted to check whether the media endorsements were successfully manipulated in terms of green brand positioning and construal level. To check the green brand positioning manipulations, participants were asked the following two questions on seven-point scales (1 = not at all, 7 = very much):

Q1. How much green emotional benefit do you seek from choosing this brand?

Table 3 Descriptive statistics, validity, model fit and correlations matrices – Study 2

Construct	Mean	SD	α	C.R.	AVE	WARM	COMPETENCE	BA	GPI
Warmth	5.269	0.867	0.746	0.747	0.500	*0.708*			
Competence	5.212	0.988	0.797	0.799	0.570	−0.055	*0.755*		
BA	5.665	0.692	0.777	0.803	0.509	0.366**	0.339**	*0.713*	
GPI	5.425	0.993	0.749	0.752	0.505	0.398**	0.362**	0.404**	*0.711*
Model fit	χ^2/df = 2.091, RESMA= 0.053, GFI = 0.901, CFI = 0.923								

Notes: n = 176. **Significant at 0.01 level, the square roots of the AVE are reported in italic, diagonally across the table

Q2. How much green functional benefit do you seek from choosing this brand?

The result of a paired *t*-test revealed that participants exposed to emotional-based media endorsement had significantly higher ratings of emotional benefit statement as opposed to the functional benefit statement (M_{GEP} = 5.689, SD = 0.839 vs M_{GFP} = 4.378, SD = 0.874; $t(44) = 6.893$, $p < 0.001$), while those exposed to functional-based advertisement had significantly higher ratings of functional benefit statement as opposed to emotional benefit statement (M_{GEP} = 4.296, SD = 1.016 vs M_{GFP} = 5.600, SD = 0.791; $t(44) = -7.073$, $p < 0.001$).

Participants were also asked to complete a 12-item category/exemplar generation task to examine their construal levels (Fujita *et al.*, 2006). The result of an independent *t*-test shows that participants under present/future conditions generate more exemplars/category labels ($M_{low\text{-}construal}$ = 6.44, SD = 1.099 vs $M_{high\text{-}construal}$ = 8.76, SD = 1.151; t (88) = −9.742, $p < 0.001$), which verifies that temporal focus successfully induced the level of construal.

5.3 Procedure and measures

Participants (n = 288; ages 26–42, M_{age} = 34; 50.0% female) were presented with a brief introduction of the experimental study and randomly assigned to one of four experimental conditions through an online questionnaire. After reading the corresponding media endorsement, they were asked to report their brand attitude and green purchasing intention on a seven-point scale (1 = strongly disagree; 7 = strongly agree). Specifically, the brand attitude was assessed using three items (unfavourable/favourable, undesirable/desirable, negative/positive) from the work of Macinnis and Park (1991). Then, they were asked to rate brand warmth and competence on the same seven-point scales used in Study 2. Finally, they were asked to provide demographic information.

ANOVA analysis was applied to test the key demographic variables relevant to the 288 valid responses, which showed that no significant differences were found between the four groups. Thus, there was no response bias in the sample of Study 3. Harman's single factor method under EFA was used to detect CMV. The EFA results showed that four factors were extracted, with 47.16% of the total variance in the first factor explained, which was less than 50%. Hence, there was no severe CMV present in Study 3. An overview of the descriptive statistics, validity and correlation matrices of Study 3 are shown in Table 5, which indicates that the measures of Study 3 generated good consistency of reliability, convergent validity, discriminant validity and satisfactory goodness-of-fit.

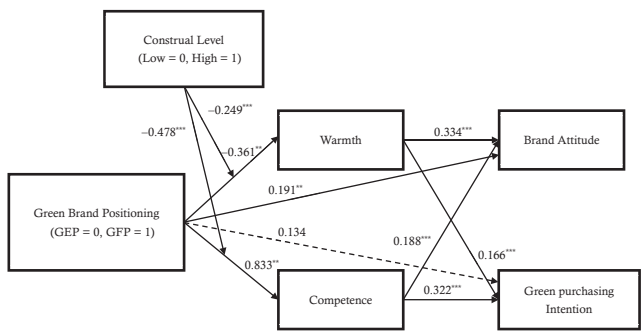
5.4 Results

Test the congruence effect between green brand positioning and construal level. The construal level was the first dummy coded (low-construal = 0, high-construal = 1). The result of an ANOVA analysis showed that the two-way interaction effect between green brand positioning and construal level was significant in predicting warmth (F (1, 284) = 36.689, $p < 0.001$) and competence (F (1, 284) = 109.087, $p < 0.001$). *H6* is supported.

Specifically, an independent *t*-test showed that participants exposed to the green emotional positioning condition with the high-level construal generated more warmth ($M_{high\text{-}construal}$ = 5.824, SD = 0.904 vs $M_{low\text{-}construal}$ = 5.102, SD = 0.839; $t(142) = -4.971$, $p < 0.001$) and competence ($M_{high\text{-}construal}$ = 5.657, SD = 0.638 vs $M_{low\text{-}construal}$ = 4.787, SD = 0.717; $t(142) = -7.695$, $p < 0.001$) than those exposed to the green emotional positioning condition with a low-level construal. In contrast, participants exposed to the green functional positioning condition with the low-level construal generated more warmth ($M_{low\text{-}construal}$ = 5.463, SD = 0.784 vs $M_{high\text{-}construal}$ = 4.917, SD = 1.011; $t(142) = 3.622$, $p < 0.001$) and competence perception than those exposed to the green functional positioning condition with a high-level construal ($M_{low\text{-}construal}$ = 5.870, SD = 0.596 vs $M_{high\text{-}construal}$ = 5.005, SD = 0.634; $t(142) = 8.440$, $p < 0.001$). Collectively, H6a and 6b are supported.

Moderated mediation analysis. To assess whether the mediating effects of warmth and competence were moderated by construal level, a bootstrap method with 5,000 resamples was performed by PROCESSS macro (Model 7; Hayes, 2013). An analysis included green brand positioning as the independent variable, brand attitude/green purchasing intention as the dependent variable, warmth and competence

Figure 2 The proposed model and path analysis



Notes: $p < 0.10$; *$p < 0.05$; **$p < 0.01$; ***$p < 0.001$

Table 5 Descriptive statistics, validity, model fit and correlations matrices– Study 3

Construct	Mean	SD	α	C.R.	AVE	WARMTH	COMPETENCE	BA	GPI
Warmth	5.326	0.944	0.751	0.753	0.506	*0.711*			
Competence	5.329	0.781	0.767	0.764	0.520	0.237	*0.721*		
BA	5.687	0.844	0.755	0.758	0.513	0.394**	0.276**	*0.716*	
GPI	5.660	0.950	0.832	0.834	0.558	0.386**	0.249**	0.407**	*0.747*
Model fit	χ^2/df = 2.985, RESMA= 0.025, GFI = 0.932, CFI = 0.947								

Notes: n = 288; **Significant at 0.01 level, the square roots of the AVE are reported in italic, diagonally across the table

as the mediators and construal level as the moderator. Figure 2 shows the results of the path analysis in the proposed model.

Furthermore, when the brand attitude is entered as the dependent variable. The results of bootstrap analysis further reveal the dual mediating effect of warmth and competence are significant at both a low construal level ($\beta = 0.119$; $\beta = 0.234$) and a high construal level ($\beta = -0.300$; $\beta = -0.123$). The 95% confidence interval for the difference between conditional indirect effects excludes zero. Similarly, when green purchasing intention is entered as the dependent variable, the results also show that the mediating effect of warmth and competence are significant at both low construal levels ($\beta = 0.117$; $\beta = 0.189$) and high construal levels ($\beta = -0.293$; $\beta = -0.109$). The confidence interval for the difference between the conditional indirect effects excludes zero. The results of the moderated mediation analysis are shown in Table 6.

6. Discussion

The primary objective of this study was to investigate the role of green brand positioning in enhancing consumers' attitudes and purchasing intentions towards green brands. Study 1 indicates that green brand positioning positively influences consumers' brand attitudes and green purchasing intentions. Furthermore, this study sheds light on a brand stereotype-based mechanism for the effect on consumer response of green brand positioning. In Study 2, we demonstrate that green brand positioning significantly influences warmth and competence, which, in turn, leads to positive consumer response. Finally, this study provides empirical evidence that the construal level moderates the effect of green brand positioning on consumers' warmth and competence perceptions. Specifically, the results of Study 3 suggest that consumers with high-level construal experience more warmth and competence with green emotional positioning strategies, whereas those with low-level construal experience more warmth and competence with green functional positioning strategies.

6.1 Theoretical implications

This study advances theoretical contributions to green brand management literature in three important ways. Firstly, this study adds empirical evidence in support of GEP and GFP as equally important antecedents to enhance consumer response, enriching understanding in the green branding context on the positioning strategies that lead consumers to develop positive attitudes and purchase intentions towards green brands.

Table 6 Moderated mediation analysis of warmth and competence

Construct	Index	Boot SE	95% CI LLCI	95% CI ULCI
Brand attitude				
Warm	−0.420	0.117	−0.609	−0.226
Competence	−0.326	0.136	−0.595	−0.068
Green purchasing intention				
Warm	−0.410	0.099	−0.608	−0.219
Competence	−0.288	0.139	−0.550	−0.100

Note: 95% CI = 95% confidence interval, index: the difference between conditional indirect effects

Secondly, this study uncovers a stereotype-based mechanism that explains how environment-friendly features or attributes reflected from a variety of positioning strategies trigger consumers' stereotyping process in a green branding context. In particular, empirical results showed that consumers judge green emotional positioning strategies higher on brand warmth, whereas they judge green functional positioning strategies more highly on brand competence. With respect to the green branding strategy, many studies have explored its upstream impact on the consumer level, such as positive brand attitude, purchase intention and brand loyalty (Wu *et al.*, 2018; Lin *et al.*, 2017; Chen *et al.*, 2017). However, the process by which green brand positioning affects consumer brand attitude and green purchasing intention remain underexplored. This is the first empirical study that examines the dual mediating roles of warmth and competence in the relationship between green brand positioning and consumer response. The insight from such findings also provides an important explanatory account for other research concerning consumers' cognition and perception towards diverse green brand positioning strategies.

Finally, the current research extends the body of knowledge of green branding literature by identifying the construal level as a moderating variable that impacts consumers' warmth and competence perceptions towards two different green brand positioning strategies. Although many previous marketing studies have investigated the moderating role of construal level on consumers' purchasing decisions (Goodman and Malkoc, 2012; Reczek *et al.*, 2018), a key contribution lies in demonstrating that the congruence between green brand positioning strategies and construal level facilitates consumers' brand stereotyping processing, which ultimately affects their brand attitude and green purchasing intention. Thus, the study identifies the boundary conditions under which the effectiveness of GEP and GFP strategies will be effectively will not be undermined.

6.2 Managerial implications

The findings of this study offer some significant implications for green brand management. Foremost, our study offers the important insight that pursuing a green identity for brands through green brand positioning is one of the essential elements of green marketing strategies because it can positively affect consumer attitudes and purchase intentions towards green brands. Therefore, brand practitioners should devote greater effort in developing a green positioning identity, to obtain differentiation advantages in new green markets. The findings of our study also indicate that both GEP strategy and GFP lead to a favourable perception of brands. Therefore, green communication campaign planners should implement comprehensive green brand positioning strategies, which not only embed symbols of green emotional benefits such as warm feelings of generosity, social identity and emotional affinity towards nature but also deliver information on environmental functional attributes such as energy savings, low carbon emissions and recyclability.

Moreover, to facilitate the stereotyping process, communication messages of green emotional positioning strategies should highlight a green brand's loving and caring intention towards the environment and society to further enhance consumers' warmth perception towards green brands.

This can be accomplished by participating in voluntary environmental actions and collaborating with non-profit organisations, which are perceived as warm organisations due to their commitment to the social good. On the other hand, green functional positioning messages should underline a green brand's knowledge and skills in alleviating environmental degradation to further enhance consumers' competence perception towards green brands. Sufficient convincing information should be supplied about a green brand's investment in process-driven or product-driven environmental innovations and other pollution prevention technologies through appropriate advertisements.

Finally, to achieve desirable stereotypical judgements towards green brands, communicating messages of green brand positioning strategies should ensure the activation of matching construal levels in the decision context. Specifically, green brand managers should frame the environmental benefits of green brands at a more abstract level in developing green emotional positioning strategies, while framing the environmental attributes of green brands at a more concrete level in developing green functional positioning strategies so that consumers would experience more warmth and competence towards green brands. Due to the close relationship between construal level and temporal distance, green market campaigners can use subtle executional elements such as imagery to indicate the future or the present in advertisements to induce a high-level or low-level construal.

6.3 Limitations and future research directions

This study has some limitations that suggest directions for future studies. Firstly, this study was conducted in the case of green brands in China. Future studies could control for the effect of culture in the analysis to provide more insights into green branding strategies. Meanwhile, comparative studies between consumer samples from different nations will be valuable to further explore the impact of cultural differences on the development of green branding positioning strategies and their effects on consumer response. Secondly, the experimental settings of this study are based only on two industries (the dairy industry and the appliance industry). Future research could consider comparing multiple product categories of green brands from other industries to increase the generalisation of the present research findings. Thirdly, this study only focusses on a brand – stereotype mechanism to explain consumer response towards green brand positioning. An investigation of the additional mediating variables and moderating variables should be conducted in future studies to better explain the current framework. Finally, this research was conducted with quantitative methods using experimental studies, and future studies may use qualitative methods to explore consumers' implicit perceptions and judgements of green brand positioning.

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